

Semester-II notes 2013-14

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Pilani Campus

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50 Years
in the service
of the nation



BITS Pilani
Pilani Campus



editorial

The dedication of The New Academic block popularly known as 'NAB' is nothing short of incredible! A new academic building is ushering in a new development era for BITS University. The opening of BITS Pilani's this state-of-the-art academic building on Wednesday, March 28, was a new history in the making. For students, the new facility was a wonderful freedom for their creative and academic pursuits. For faculty, the opening represented the dawn of new academic explorations. For Birlas, it was a deeply personal moment. For all involved, it was the start of something big and new.

The innovative new design is greatly planned to enhance the aura and scale of iconic tower. It gives a powerful visual identity to BITS, creating a unique civil engineering marvel in harmony with the existing structures. The building has several new features and will act as a benchmark for the quality of infrastructure that campus will witness in the coming years. Truly, the development is an essential part of any successful organization. The infrastructure needs that have already taken place, and those to come, will ensure BITS can continue to meet the demands of higher education in the country and remain relevant and committed in a constantly changing world.

→ Laser show



Our students are involved in every imaginable activity, and we have particular strengths in the arts, music, science and sport. The 32nd edition of APOGEE, the Annual Technical Festival, got bigger and better this semester, was held at BITS Pilani during 27 – 31 March 2014. Truly justifying its meaning as the 'highest point', APOGEE signifies the zenith of science, engineering and path breaking in a landscape of the future innovators, scientists and corporate czars. From projects, paper presentations & guest lectures on one hand, to debates, quizzes & cultural nights, the APOGEE'14 was a perfect host to a gamut of activities offering the best of creativity, innovation and talents

with the brightest minds. APOGEE has also witnessed speakers of exemplary portfolios in its Think Again Conclave, an out of box lecture series featuring incredible personalities from different walks of life leaving the BITSian crowd spellbound with their amazing lectures on various aspects. There was a spectacular display of fireworks and laser show in the rotunda of the newly inaugurated Academic Building as a part 50 years of Golden Jubilee celebrations and APOGEE festival.

→ Think Again Conclave



Pilani campus organized Lok Rang, a Rajasthani Dance and Music Night to celebrate the completion of its 50 years and unveiling of New Academic Block on April 10, 2014. The high crescendo event was enjoyed by everyone at the Amphitheatre of New Academic Building. It included the top performances from the heartland of Shekhawati, staged by the globally popular Indian folk groups: Manganiyar, Sapera, Dhamaal and Kalbeliya.

→ Lok Rang



Undoubtedly, it has been a remarkable semester for the Pilani campus, both within and outside the university. We hope you enjoy reading about some of the varied events, celebrations and achievements of the semester.

NAB Inauguration

A state of the art new academic block covering over 1,60,000 sq.ft. was inaugurated by Smt. Sarala Birla, Sri B.K. Birla, Industrialist, Dr. Kumar Mangalam Birla, Chancellor, BITS Pilani, Smt. Rajashree Birla, Prof. B.N. Jain, Vice Chancellor, Prof. G. Raghurama, Director and other dignitaries on Friday, 28 March, 2014. With a cost of Rs. 75 crores, this building has been designed by a well-known architect, Mr. Hafeez Contractor. The building is a part of the major modernization and expansion plan for the Pilani campus costing over Rs. 600 crores under Project Parivartan which was announced by the Chancellor Dr. Kumar Mangalam Birla on 14 November, 2011.

On this auspicious occasion, Dr. Kumar Mangalam Birla addressed the audience, "Our strategic vision is to raise BITS to become one of the leading Science and Technology Universities in Asia, with a clear focus on teaching, research and industry engagement. This is yet another step forward to increase the depth and reach of our campus and is a reflection of our vision."

Prof. B. N. Jain remarked, "The new academic complex will provide a modern physical ambience that covers classrooms, laboratories, department offices and faculty chambers, and is expected to be at par with

what one might expect in any highly-ranked university in India or abroad. I am certain this new investment will contribute to our on-going efforts to provide a physical and academic environment that nurtures excellence in teaching, research, industry engagement and community outreach."

Prof. G. Raghurama also addressed the gathering, "With 23 state of the art classrooms, seminar rooms, meeting rooms, faculty chambers, computing labs and internet connectivity throughout, the new facility adds a fresh dimension to the study atmosphere in Pilani campus. I invite the faculty and students to let their academic pursuits, creativity and talents unleash in the new academic building, which I am sure, will inspire them."

Being a major addition to the campus in recent years, the new building has 23 classrooms (capacity of 70 - 200 seats), a 200 - seater auditorium, the Institute's computing lab, as well as the Departments of Computer Science, Mathematics, Management, Economics & Finance, and Humanities & Social Sciences. Built in a sunken plot in front of the Institute's iconic clock tower, the facility has a rotunda and landscaped avenue adding to its grandeur. The facility is fully air-conditioned with a roof-top terrace garden which is at level with the rest of the campus, thus providing a panoramic view.

→ NAB Inauguration



Founder's Day

The 63rd Founder's Day was celebrated at the Pilani campus on Basant Panchami, Tuesday, 5 February, 2014. Festivity, gaiety and celebrations marked the occasion. Down the memory lane, the Pilani campus was inaugurated on Basant Panchami Day in 1951 by the First President of India, Dr. Rajendra Prasad.

63rd Founder's Day started with a floral tribute to the Founder Chairman, Padma Vibhushan Sri G.D. Birla at his statue in the campus. Led by Vice Chancellor Prof. B.N. Jain and Director, Prof. G. Raghurama, the floral tribute was offered by the BITS community comprising the students, faculty and their families. This was followed by Thyagaraja Aradhana at FD-II wherein Ragamalika presented an excellent rendition of sage Thyagaraja's kirtanas in Carnatic music style.

→ Floral Tribute



In the evening, a program was organized at the auditorium in which cultural associations presented enchanting performances which were the creative blend of traditional and modern dance and drama. The cultural associations which took part were: Maurya Vihar, Utkal Samaj, Sangam, Udgam, Kannada Vedike, Punjab Cultural Association, Gurjari, Madhyansh, Capitol, Marudhara, Maharashtra Mandal, Pilani Tamil Mandiram, Kairali, Moruchaya, Haryana Cultural Association, and Andhra Samiti.

→ Prof. G. Raghurama Lighting the Lamp



→ Non-teaching Felicitation



Interface

The 37th All India Management Convention, Interface 2014 was organized by the Department of Management, BITS Pilani from 31 January - 2 February, 2014. Interface which started as an annual event in 1978 has been running every year with an increasing participation from various colleges across the country. For more than three decades this pan-India management fest has seen students coming with exceptional managerial dexterity, innovative business ideas and incomparable entrepreneurial skills.

This time around, the Management Extravaganza spread over three days with the theme, 'Ran-Neeti (or Military/war strategy)' had several events including Paper presentations, Finleshan Equity Research Event (Finance), Angry Traders Online Virtual Trading Event (Finance), Strategic CSR Plan Competition (HR), Case Study Competition (HR), Redemption : Ad Campaign Event (Marketing), Street Smart Marketer (Marketing), Op-Arena (Operations), Sarachana : Short Story Competition (Reflexionar), Doodle in a Muddle : Doodle Making (Reflexionar) and Ran-Neeti@War-rooms : Expert talks on "How corporate strategies are designed."

The festival was inaugurated by the Chief Guest, Mr. Harsh Juneja, Vice-President, Tata Teleservices Ltd., Guest of Honour, Mr. Sameer Pathak, Senior Manager – PAC, Coca-Cola India Inc., Prof. G. Raghurama, Director, BITS Pilani and Prof. Anil Bhat, Head, Department of Management. Mr. Juneja, addressed the audience and shared a success mantra, "to succeed in the corporate world, the managers need to follow the principles of SIDI (S = remain Simple, but structured; I = gather Information; D = possess the Drive to perform; and I = Improve continuously)." Mr. Pathak also gave valuable inputs that "a good manager does not merely sell, but adds value. Young managers must regularly question the status quo so that they can improve and move forward. Seeking feedback from all stakeholders is very important."

Interface serves as a platform for students and professionals to come alive with the skills and ideas that are necessary to run the ever dynamic and fast growing

industries in India. The 2014 edition of INTERFACE proved to be yet another successful fest organized by the Department of Management.

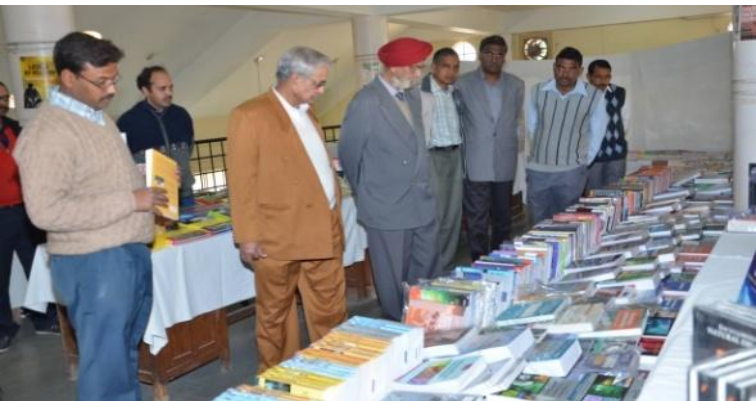
→ All India Management Convention, Interface 2014



Basant Book Festival

The Basant Book Festival was held at Akshay Supermarket during 18 February - 2 March, 2014. The Book Festival was inaugurated by the Registrar of the University, Prof. M. M. S. Anand.

→ Basant Book Festival



A large number of Academic books, Biographies, Travelogues, Fiction and Children's books, books written in Hindi and General reading material were exhibited for display and sale. Akshay offered a special discount of 20% during the festival. The festival received an overwhelming response from literature enthusiasts and collectors alike. Apart from the BITS community, people from local schools, institutions and the general public utilised this opportunity to buy books for their families.

New WILP Office

Collector of Jhunjhunu District, Dr Arushi Malik, IAS, inaugurated the new WILP Office on Thursday, 13 February, 2014. The new office located in the north wing of the library, houses faculty chambers, cabins for administrators, meeting rooms, seminar rooms, storage and work areas for office staff and other facilities. Present on the occasion of inauguration were Vice Chancellor Prof. B. N. Jain, Director Prof. G. Raghurama,

Deputy Director Prof. R. N. Saha and other faculty members and staff of WILP besides the media.

Prior to the inauguration, in an informal meeting joined by senior faculty, Vice Chancellor Prof. B. N. Jain and the Director Prof. G. Raghurama briefed Dr. Malik about the activities of the Institute and future plans.

Since 1979, the WILP Division of BITS has been offering several programmes to working industry professionals that lead to a formal undergraduate or post-graduate degree. The programmes, with an enrollment of over 20,000 professionals, provide a learning environment that fully integrates the work experience provided by the industry and learning environment provided by faculty in a classroom setting. The WILP programme offers degree programmes in several areas, including Software Engineering, Manufacturing Engineering, Process Engineering, Embedded Systems, Microelectronics, Pharmaceutical Operations and in Management.

→ New WILP Office



Blood Donation Camp

The Blood Donation Camp, organized on a yearly basis by NSS BITS Pilani in collaboration with the Indian Red Cross Society, Delhi is credited to be one of the best amongst educational institutions in Southeast Asia.

→ Blood Donation Camp



Set up in the Students Activity Centre, and inaugurated by Prof. G. Raghurama, Director, BITS Pilani, the camp was run for two days from 1 - 2 February, 2014. This year, a total of 850 volunteers turned up for blood donation and 696 units of blood were collected.

Women's Day Celebrated

UGC Centre for Women Studies (CWS) undertakes diverse range of academic and field activities with the objective of empowering women and upliftment of their families in social, economic domains and health. The Centre organizes Conferences, Workshops, Training Programs and conducts research studies on the issues of women and society. The Centre has initiated various activities during 2014.

→ Group Song



Among various other activities, this year UGC Centre for Women Studies, BITS, Pilani celebrated the International Women's Day on 8 March, 2014 in LTC Lawns, to pay respect and understand the importance of women in our life, raise awareness about injustice, and acknowledge the achievements that have passed and those that are yet to come, and provide a space with opportunities for women to participate in range of activities as part of a one day event. In this event around 90 women from BITS & CEERI campus participated. Prof. Sangeeta Sharma, Coordinator, UGC Centre for Women Studies welcomed the participants and described the importance of Women's Day. Dr. Devika from the Department of Humanities & social sciences and Ms. Madhusmita from the Centre for Women Studies coordinated the events. Events like Song and dance competition, fashion parade were organized and prizes were distributed to the winners. A research study on "Causes responsible for the dropping out of girls from the higher education" is going on at the Centre.

→ Group Dance



academia: a confluence of ideas

Seminars/Conferences/ Workshops/Training Programmes

NCRTDOR - 2014

Department of Mathematics, Pilani Campus, BITS Pilani conducted a two day National Conference on "Recent Trends and Development in Operations Research (NCRTDOR-2014)" during 22 - 23 February, 2014 under UGC-SAP (DRS I) programme.

The conference provided a platform to the researchers to discuss the challenges in the area of Operations Research and their applications in the real world. Areas covered in the conference were Queuing Theory, Inventory Theory, Reliability Theory, Information Theory etc. Seven eminent researchers from institutes of repute across the nation had given invited talks besides keynote address and a large number of delegates participated and presented their research papers in the conference.

→ NCRTDOR-2014



enriching the learning experience

visits by faculty

Dr. Rajiv Gupta, Senior Professor, Department of Civil Engineering, presented a paper titled “Mapping Solar Potential of West India” in a GIS based analysis conducted during the Geospatial World Forum, organized in the Centre International de Conférences Genève, Switzerland, from 5 - 9 May, 2014.

→ Dr. Rajiv Gupta



Dr. Yashvardhan Sharma, Assistant Professor, Department of Computer Science and Information Systems, visited the School of Electrical Engineering and Computer Science at Oregon State University, Corvallis, USA from 15 May - 15 July, 2014 as part of the University Immersion Scheme of BITS Pilani. Under the guidance of Prof. Prasad Tadepallin, he carried out research in the area of Machine Learning and Natural Language Processing as well as studied the problem of “Wikification”, particularly, Entity Linking and Co-reference resolution using machine learning algorithms.

→ Dr. Yashvardhan Sharma



Dr. Dipendu Bhunia, Assistant Professor, Department of Civil Engineering, visited Trinity College Dublin, University of Dublin, Ireland, on 19 June, 2014 to study and collaborate on the topic “The Behavior of Coupled Shear Walls.”

→ Dr. Dipendu Bhunia



Dr. Navneet Gupta, Assistant Professor, Department of Electrical and Electronics Engg./Instrumentation, presented a paper titled the “Material Selection of LTCC based Microstrip Patch Antenna Substrate Using Ashby’s Approach” during the IEEE International Symposium on Computer, Consumer and Control, 2014 (IS3C-2014) organized at the National Chin-Yi University of Technology, Taichung, Taiwan from 10 - 12 June, 2014. He also visited the National Taiwan University of Science and Technology (NTUST), Taipei, Taiwan as part of the University Immersion Scheme of BITS Pilani from 26 May - 18 July, 2014.

invited lectures by faculty

Dr. Arya Kumar, Professor, Department of Economics and Finance, participated in an expert discussion on “Unlocking Value for Start-up Incubation through Corporate Engagement” organized by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) in association with the National Entrepreneurship Network (NEN) at IIT Delhi on 27 January, 2014.

→ Dr. Arya Kumar



He was invited to preside over a session in the workshop on “Best Practices in Incubation”, organised by IIT Gandhinagar on 3 March, 2014 in which prominent incubators from the country participated. He was also present in the Governing Body meeting of STIDE, Central University of Rajasthan, held at its campus on 5 March, 2014, in order to help them in identifying incubates for finding under TIDE grant of DIT, Government of India. Dr. Kumar was invited as the Guest of Honour and keynote speaker for the inauguration function of PRAVAH and Tech Bazar of the Swami Keshvanand Institute of Technology (SKIT), Jaipur on 6 March, 2014. Further, he contributed as an expert member in the Board of Studies Meeting of the Management Dept. of DIT University, Dehradun on 29 March, 2014 to review and modify the curriculum and the Ph.D. programme in management, keeping in view recent developments and opportunities. He also took part in a conference on “Fostering Innovations and Creativity in Indian Industry through Intellectual Property for Higher Growth Trajectory” organised by FICCI, New Delhi on 26 April, 2014 – the World Intellectual Property day. He delivered a talk on the “Quality Improvement Programme on Excellence in Teaching” at VIT Jaipur on 14 July, 2014.

Dr. Jitendra Panwar, Associate Professor, Department of Biological Sciences, delivered a talk on the “Development of ‘bioinspired’ protocols for fabrication of nanoparticles” as part of the *Training Course on Nanoparticle Production, Characterization and Utilization in Agriculture* at the Central Arid Zone Research Institute, Jodhpur on 9 March, 2014, Jodhpur, India.

Dr. Sangeeta Sharma, Associate Professor, Department of Humanities and Social Sciences, was invited to deliver a talk on “Paralinguistic features in Business communication” on 3 April, 2014, as part of the Personality Development and Career Counselling Program at the Poddar Institute of Management. She was also invited as the keynote speaker for the International Conference on Sustainability Management and the Power of Innovation organized at the Prestige Institute of Management, Gwalior from 10 - 12 January, 2014. The topic she addressed was “Innovation: Thinking out of the box.”

Dr. Pushp Lata, Associate Professor, Department of Humanities and Social Sciences, chaired a technical session at the Sadaa Third International Conference, organized on the theme “Language, Literature & Library: Disruptive Digressions & Digital Dimensions” in collaboration with the Manipal University, Jaipur from 22 - 24 January, 2014. She conducted a one-day workshop on “Communication Techniques” in the Birla Technical Training Institute for Computer teachers on 15 May, 2014. She also conducted a workshop on “Art

and Science of Teaching” at the Shambhunath Institute of Engineering and Technologies, Allahabad, UP for the duration of 8 - 9 July, 2014.

→ Dr. Pushp Lata



Dr. Navneet Gupta, Assistant Professor, Department of Electrical and Electronics Engg./Instrumentation, delivered a talk on the “Material Selection Methodology for Gate Dielectric Material for MOS devices” during the National Conference on Innovations in Microelectronics, Signal Processing and Communication Technologies, organized at VIT University, Jaipur on 27 February, 2014.

→ Dr. Navneet Gupta



Dr. Shilpi Garg, Associate Professor, Department of Biological Sciences, was invited to deliver a talk on “Drug Resistance in Severe Plasmodium vivax Malaria: Special emphasis on Bikaner, Rajasthan” at the National Conference on Recent Trends and Future Prospects of Microbiology and Biotechnology organized by the Department of Biosciences, Shri JIT University, Jhunjhunu, Rajasthan from 3 - 4 March, 2014. She also chaired a Technical Session in the aforementioned conference.

accolades and achievements

Dr. Arya Kumar, Professor, Department of Economics and Finance, was invited to deliver a talk and judge entries in the final round of the Google Startup Weekend, a global grassroots movement of active and empowered entrepreneurs who are learning the basics of founding startups and launching successful ventures. The finals were organized at Prannath Parnami University, Hissar on 29 June, 2014. The non-profit organization Startup Weekend is headquartered out of Seattle, Washington, and their events have taken place across more than 400 cities in over 100 countries around the world. He also reviewed papers for the Council for Social Development, Southern Regional Center Hyderabad.

Entrepreneurship Awards to the Institute

The "National Entrepreneurship Network (NEN) Premier Award for Northern Zone" was conferred on BITS Pilani for the promotion of Entrepreneurship Development on Campus in the valedictory function of E-Week organised on 8 March, 2014 in Jaipur.

→ NEN Premier Award for BITS Pilani



Dr. Rajiv Gupta, Senior Professor, Department of Civil Engineering, was nominated as the Editor-in-Chief (EIC) of the journal, "Recent trends of Civil Engineering and Technology."

Dr. Pradyumn Chaturvedi, Assistant Professor, Department of Electrical and Electronics Engg./Instrumentation, guided a Ph.D. Candidate (Mr. Amit Ojha) at MANIT, Bhopal as a Co-supervisor. His thesis was awarded on 19 February, 2014. Also, Dr. Chaturvedi was registered as a Ph.D. Supervisor at Rajasthan Technological University (RTU), Kota on

24 May, 2014. He is currently guiding a Ph.D. candidate (Mr. Puneet Chaudhary) at RTU, Kota.

Dr. Pradyumn Chaturvedi, Assistant Professor, Department of Electrical and Electronics Engg./Instrumentation, conducted a workshop entitled "Common Mode Voltage Control and Neutral Point Potential Regulation in Multilevel Inverter" as part of a week-long short term course on *Multilevel Inverters and Its Applications* at the Indian Institute of Technology, Roorkee, Uttarakhand on 2 January, 2014.

Dr. Dipendu Bhunia, Assistant Professor, Department of Civil Engineering, was a visiting academic at the Trinity College, The University of Dublin : funded by ISCA India fund, TCD Dublin and University-immersion Programme, BITS Pilani (May-July, 2014).

Dr. Navneet Gupta, Assistant Professor, Department of Electrical and Electronics Engg./Instrumentation, received a Certificate of Appreciation from the Department of Electronics and Computer Engineering, NTUST, Taiwan for his remarkable efforts towards research work.

Dr. Sangeeta Sharma, Associate Professor, Department of Humanities and Languages, received best paper award for "Odyssey of Women in Advertising: A case study of Lux" written and presented by her and Madhusmita Das at the 3rd Biennial Conference held at AMSOM Ahmedabad University during 3 - 4 April, 2014. She has been conferred the status of member of the Board of Studies for DIT University, Dehradun.

Dr. Raj Kumar Gupta, Assistant Professor, Department of Physics, conducted a workshop as a convener entitled "Workshop and Training on Current Research Trends in Condensed Matter-Material Science" in BITS Pilani, Pilani Campus for the duration of two days from 7 - 8 March, 2014.

Dr. Chandra Shekhar, Ph.D., Assistant Professor, Department of Mathematics, presided as General Secretary over the "National Conference on Recent Trends and Development in Operations Research (NCRTDOR-2014)" organized by the Department of Mathematics, BITS Pilani, Pilani Campus for the duration of two days from 22 - 23 February, 2014.

→ Dr. Chandra Shekhar



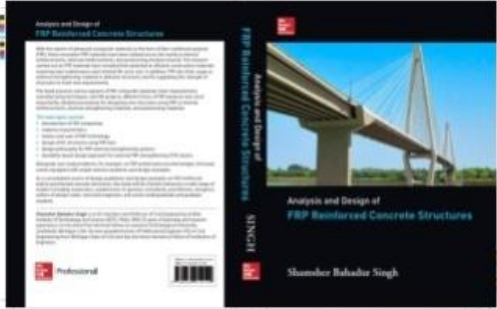
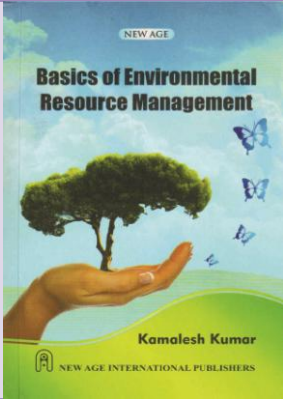
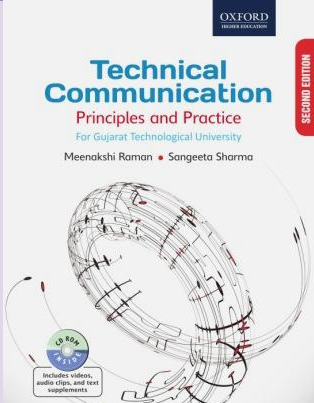
significant projects

S.No.	Principal Investigator and Name of the Department	Title of the Project	Funding Agency	Amount and Duration
1.	Dr. Rajiv Gupta <i>Department of Civil Engineering</i>	Roof top Rainwater Harvesting for Safe, Potable and Healthy Drinking Water and Ground Water Replenishment for BITS Pilani, Pilani campus	Centre of Excellence, in Waster, Water and Energy Management, Birla Institute of Technology and Science, Pilani	INR 91,00,000 3 Years
2.	Dr. Anshuman and Dr. Dipendu Bhunia <i>Department of Civil Engineering</i>	Effect of Partial replacement of cement with marble slurry on	DST	INR 28,38,000 3 Years
3.	Dr. Pradyumn Chaturvedi <i>Department of Electrical and Electronics Engg./Instrumentation</i>	Design and Development of DSP Controlled Reduced Device Count Multilevel Inverter for Single Phase Applications	Birla Institute of Technology & Science, Pilani Under Research Initiation Grant Scheme	INR 2,00,000 2 Years
4.	Dr. Navin Singh <i>Department of Physics</i>	Thermodynamic studies on force induced unzipping in DNA in crowded environment	DST, New Delhi	INR 18,65,000 3 years
5.	Dr. Rajneesh Kumar <i>Department of Electrical and Electronics Engg./Instrumentation</i>	Design and development of an efficient soft-switching converter with adaptive MPPT controller for a standalone photovoltaic power generation	Ministry of New and Renewable Energy (MNRE), New Delhi	INR 29,39,000 2 Years
6.	Dr. Raj Kumar Gupta <i>Department of Physics</i>	Determination of contaminants in water using functional ultrathin films	BITS Pilani under WWE	INR 9,32,000
7.	Dr. Kamalesh Kumar <i>Department of Civil Engineering</i>	Strengthening of Local Soil Using Fly Ash	UGC	INR 2,00,000 2 years
8.	Dr. Jitendra Panwar, <i>Department of Biological Sciences</i>	Investigations on metal tolerance ability of soil fungi and their potential towards nanoparticle synthesis	UGC	INR 15,05,800 3 years
9.	Dr. Vishal Saxena, <i>Department of Biological Sciences</i>	Characterization of Isoprenoids Biosynthesis Pathway enzymes from Plasmodium vivax	UGC	INR 7,78,000

academic attainments of faculty

S.No.	NAME	DEPARTMENT	JOURNAL / MEMBER DETAILS
1.	Dr. Rajiv Gupta <i>Senior Professor</i>	Civil Engineering	<p>Reviewed the Research articles as mentioned below:</p> <ul style="list-style-type: none"> • Development and Feasibility Analysis of Bagasse Ash Bricks EYENG-556, Journal of Energy Engineering, ASCE, 14 January, 2014. • Assessment of Surface Water Quality of Tunggak; The Adjacent River to Gebeng Industrial Estate Pahang, Malaysia JCEA-E 20130911-2, Journal of Civil Engineering and Architecture, David Publishing Company, USA, 28 January, 2014. • Prediction of Compressive Strength for HPC mixes containing different Blends using ANN CAC36746XC, Computers and Concrete - an International journal, Korea, 3 March, 2014. • Standard Plate Counts in Distribution Systems and Drinking Water Safety, JCEA-E 20131106-3, Journal of Civil Engineering and Architecture, David Publishing Company, USA, 21 March, 2014. • Assessment of Inlets Capacity for Inundation Diminution in Urban Watershed CET-D13-0018, Chemical Engineering Transactions, 17 April, 2014. • Ceramic ware waste as coarse aggregate for structural concrete production, Environmental Technology, Taylor & Francis, 5 May, 2014. • Fixed Bed Studies for the Sorption of Nitrophenol from Water Environment using Pore and Surface Diffusion Model IEIA-D-13-00059, Journal of The Institution of Engineers (India) – Springer, 7 May, 2014. • Retrofitting of a sustainable reflecting-cum-insulating material for performance improvement of the indoor environment IBE-14-0034, Indoor and Built Environment, SAGE Journals, UK, 8 May, 2014. • Hardened state analysis of recycled ring-shaped polyethylene terephthalate (RPET) fiber reinforced concrete MTENG-2875, Journal of Materials in Civil Engineering, ASCE, 13 May, 2014. • Active Chilled Beam (ACB) system, the solution with low energy and maintenance cost, and the best economic life - TID tower, Tirana, JSDEWES.0049, Journal of Sustainable Development of Energy, Water and Environment Systems, 20 May, 2014. • Tool for Life Cycle Analysis of Façade Systems for Industrial Buildings; SDEWES2014.0301, 9 Conference on Sustainable Development of Energy, Water and Environment Systems, 20 - 27 September, 2014, Venice-Istanbul, 9 June, 2014. • Evaluation of the use of Inertial Platform for the Generation of Cartography JCEA-E 20140523-1, Journal of Civil Engineering and Architecture, David Publishing Company, USA, 17 June, 2014. • Developing a project-based model of dynamic learning capability and applying this conceptual lens to the performance of collaborative infrastructure projects; CI-05-2014-0031, Construction Innovation: Information, Process, Management, Emerald Group Publishing Limited, United Kingdom, 22 June, 2014. • Design development of sustainable building for temperature control within built form. EYENG-720, Journal of Energy Engineering, ASCE, 6 July, 2014. • Manuscript on "Structural Analysis: Fundamentals and Applications", Cambridge University Press, 16 July, 2014. • Manuscript review of a book on 'Building construction materials and techniques', Pearson Education, 23 July, 2014.
2.	Dr. Pradyumn Chaturvedi <i>Assistant Professor</i>	EEE	<ul style="list-style-type: none"> • Program Committee Member, Proceedings Author and Reviewer of following IEEE Student Conference on Electrical, Electronics and Computer Science, SCECS-2014, held at MANIT, Bhopal, MP during 1 - 2 March, 2014.

S.No.	NAME	DEPARTMENT	JOURNAL / MEMBER DETAILS
			<ul style="list-style-type: none"> • Program Committee Member of National Conference on IT Business, Industry and Govt., held at Shri Aurobindo Institute of Technology, Indore, MP, during 8 - 9 March, 2014. • Session Chairing at AICTE Sponsored National Conference at SATI, Vidisha (MP) during 23 - 24 January, 2014. • Member, Editorial Board, International Journal "IOSR Journal of Electrical and Electronics Engineering" <p>Reviewed the Research articles as mentioned below:</p> <ul style="list-style-type: none"> • "Torque Ripple Reduction of IM-DTC Drive with 5-Level Hybrid Cascaded H-Bridge Inverter: Simulation and Experimental Verification", Electric Power Components and Systems, Taylor & Francis, reviewed on 12 July, 2014. • "Hybrid and Frequency Fuzzy Anti-Islanding for Grid Connected and Islanding Operation in Distributed Generation Systems ", IEEE Trans. on Power Electronics, reviewed on 20 June, 2014. • "Investigation of the Effects of Sampling Frequency on the THD of 3-Phase Inverters Using Space Vector Modulation", IEEE Trans. on Power Electronics, reviewed on 15 July, 2014. • "Development of LabView based Multilevel Inverter with Reduced Number of Switches", International Journal of Power Electronics, reviewed on 29 March, 2014. • "Three Level NPC Rectifier Based Midpoint Converter Fed SRM Drive", International Journal of Power Electronics, reviewed on 5 January, 2014. • "Investigations on Reduced Order Mathematical Model of VSI Fed Induction Motor Drive", International Journal of Power Electronics, reviewed on 8 April, 2014.
3.	Dr. Navin Singh <i>Assistant Professor</i>	Physics	Reviewed two papers for Journal of Molecular Liquids and Physica A : Statistical Mechanics and its applications.
4.	Dr. Pushp Lata <i>Associate Professor</i>	Humanities and Social Sciences	Reviewed a book entitled " <i>CLT: The Changing Face of ELT</i> " edited by Dr. Sanjay Arora, under the GOI Financial Scheme, by EFLU, Lucknow campus. 2014. Also, reviewed three research papers for JSSH, International Journal and edited four papers for International ELT Research Journal.
5.	Dr. Raj Kumar Gupta <i>Assistant Professor</i>	Physics	Reviewed a paper for the Journal "Langmuir", American Chemical Society.
6.	Dr. Chandra Shekhar <i>Assistant Professor</i>	Mathematics	Reviewed the Research articles as mentioned below: <ul style="list-style-type: none"> • Transient Analysis of Finite F-policy Retrial Queues with Delayed Repair and Threshold Recovery, National Academy Science Letters, Springer • Impact of queuing theory and alternative process routings on machine busy time in a dynamic cellular manufacturing system, International Journal of Engineering, Iran • Hierarchical Alpha-Cut Fuzzy C-Means, Fuzzy ARTMAP and Cox Regression Model for Customer Churn Prediction, International Journal of Engineering, Iran • Reliability Measures of a Single-Unit System under Preventive Maintenance and Degradation with Arbitrary Distributions of Random Variables, Journal of Reliability and Statistical Studies, India • Reliability of Time dependent Stress Strength n^{th} repair system for finite mixture model, International Journal of Probability and Statistics, Scientific & Academic Publishing, USA.
7.	Dr. Santosh Kumar Padhi <i>Assistant Professor</i>	Biological Sciences	Reviewed a manuscript of a reputed international journal Microbial Cell Factories on invitation from the editor-in-chief on 13 January, 2014.
8.	Dr. Navneet Gupta <i>Assistant Professor</i>	EEE	<ul style="list-style-type: none"> • Reviewed a research paper titled the "Transmit Beam forming for MIMO optical Wireless Communication Systems", WIRE-D-13-00377, for the journal Wireless Personal Communication by Springer on 15 February, 2014. • Reviewed "Efficient VCO using FinFET" for the IEEE International Conference on Advances in Electronics, Computers and

S.No.	NAME	DEPARTMENT	JOURNAL / MEMBER DETAILS
			<p>Communications (ICA ECC) to be held during 31 October - 2 November, 2014 at Reva Institute.</p> <ul style="list-style-type: none"> Appointed as Reviewer for Third International Conference on Technological Advances in Electrical, Electronics and Computer Engineering (TAECCS 2015), Lebanese University, Beirut, Lebanon to be held during 29 April - 1 May, 2015. Appointed as Member of Board of Studies (BoS) of DIT University, Dehradun.
9.	Dr. Shamsher Bahadur Singh <i>Professor</i>	Civil Engineering	 <p>Authored a Book on Analysis and Design of FRP Reinforced Concrete Structures, Publisher : McGraw Hill Education, 1 June 2014</p>
10.	Dr. Kamallesh Kumar <i>Assistant Professor</i>	Civil Engineering	<ul style="list-style-type: none"> Authored a book on the Basics of Environmental Resource Management. Publisher: New Age International (P) Limited. Member, Editorial Board, STM JOURNALS, Journal of Geotechnical Engineering for the period January to July, 2014 and provided review comments on five technical papers for STM JOURNALS, Journal of Geotechnical Engineering, Vol. 1, No. 1, 2014. 
11.	Dr. Jitendra Panwar <i>Associate Professor</i>	Biological Sciences	<p>Appointed as Vice Chancellor's Nominee, Board of Studies, Amity Institute of Microbial Technology, Amity University, Jaipur on 16 April, 2014.</p> <p>Reviewed following research papers:</p> <ul style="list-style-type: none"> "Interfacial hybridization of lignocellulosic fibers and its effect on mechanical and chemical properties" submitted to "Energy and Environment Focus" on 19 January, 2014. "TiO₂ nanoparticles biosynthesis and its effect on phenological, biochemical, activity of soil enzymes and rhizospheric microbial population of mung bean (<i>Vigna radiata</i> L.)" submitted to "Journal of Agricultural and Food Chemistry" on 25 February, 2014. Book chapter entitled "Nanotechnology in foods" submitted to an upcoming Springer Book entitled "Emerging Nanotechnologies in Agriculture" (Editors. Mahendra Rai, Nelson Duran and Caue Ribeiro).
12.	Dr. Sangeeta Sharma <i>Associate Professor</i>	Humanities and Social Sciences	<p>Invited as a member of Board of Studies for second meeting at Department of Humanities, DIT University Dehradun on 24 March, 2014 to finalize the humanities courses, their contents and offerings. Reviewed Technical Communication by Cambridge University Press, New Delhi, 2014. Dr. Sharma also co-authored a book titled "Technical Communication-Principles and Practice", Second Edition, Oxford University Press, New Delhi for the Gujarat Technological University.</p> 

Student round-up

Ms. Zarna Pala Rajesh Kumar (2011PHXF010P) was awarded the 2nd Prize for her poster presented at the conference on “Recent trends and future prospects of Microbiology & Biotechnology” organized at Shri Jagdishprasad Jhabarmal Tiberwala University (JJTU), Jhunjhunu, on 3 - 4 March, 2014.

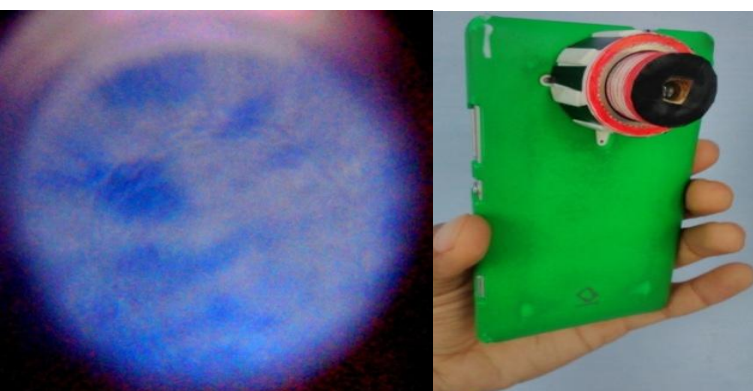
Mr. Gagandeep S. Saggi (2009PHXF412P) delivered a talk on the *Characterization of Isoprenoid pathway genes from Indian field isolates of Plasmodium vivax* at the conference on “Recent trends and future prospects of Microbiology & Biotechnology” organized at Shri Jagdish Prasad Jhabarmal Tiberwala University (JJTU), Jhunjhunu, on 3 - 4 March, 2014. For his efforts, he was conferred upon the Young Scientist Award.

→ Gagandeep S Saggi: Young Scientist Award



Mr. Shaurya Kaushal (2011A4TS280P) was awarded the 1st Prize in Dhiti, conducted during APOGEE, BITS Pilani, March 2014 for creating a *Cellphone Microscope (with image processing)*. He also secured first place in the ‘Signal processing project prototype category’ for the same Cellphone Microscope during APOGEE, 2014. The Society for Research and Initiatives for Sustainable Technologies and Institutions (SRISTI) is funding the project further so that it can make an impact on improving rural healthcare and diagnosis.

→ Cellphone Microscope (with image processing)



Mr. Shikhar Agarwal (2012B4A8613P) was awarded a *Special Recommendation Certificate* at the event “Scholars for Change Campaign” organized at IIM Ahmedabad on 7 July, 2014.

→ “Scholars for Change Campaign”



Mr. Devendra Mittal (2012A2PS592P), **Mr. Pragun Vinayak** (2012A2PS386P), **Mr. Sanchit Bajaj** (2012A2PS571P) and **Mr. Vishal Kejriwal** (2012A2PS386P) secured second place in “Ideaz Civil”, a paper presentation event organized at Cognizance 2014, the tech fest of IIT Roorkee from 21 - 23 March, 2014. The paper was entitled *Analysis of properties of Papercrete with paper pulp as partial substitute for sand and its use as an alternative construction material*.

→ “Ideaz Civil” secured a second position



Mr. Pranav Narayan Gour (2011A3PS075P) and **Mr. Sujay Narumanchi** (2011A3PS025P) along with **Mr. Sanjay Singh** and **Mr. Sumeet Singh** of CEERI, Pilani co-authored and presented a paper entitled *Hardware Accelerator for Real Time Image Resizing* at the “18th International Symposium on VLSI Design and Test” organized on 18 July, 2014 at the PSG College of Technology, Coimbatore. It is one of India's oldest and most prestigious VLSI conferences sponsored by the Institute of Electrical and Electronics Engineers (IEEE), and organized by the VLSI Society of India. The paper

will be published with VDAT-2014 Conference Proceedings on IEEE Explore.

→ International Symposium on VLSI Design



Ms. Vidya Madhavan (2011ABPS629P) secured first position in an essay writing competition organized by the UN Information Centre in collaboration with the Shri Ram Chandra Mission, Chennai. The topic of the essay was “Varg Vastuo ko Dekhna nahi un par Vichaar karna jyada Mahatvapoorna hai” (Things are not merely to be looked at but they must be thought about).

Mr. Samudrala Sanjay Aathreyasa (2009C2PS709P) was conferred with the designation *International Student Delegate* at the “Make a Difference Asia Forum, 2014” organized in Hong Kong during 10 - 12 January, 2014. Mr. Sanjay’s trip to Hong Kong was funded by the Government of Hong Kong - Special Administrative Region.

→ Mr. Samudrala Sanjay Aathreyasa



Mr. Yudhajeet Dasgupta (2010A8PS274P) and **Mr. Guru Darshan PM** (2010A8PS266P) presented a paper entitled the *Application of Wireless Sensor Network in Remote Monitoring* at the “International Conference on Automation, Control, Energy and Systems 2014”, West Bengal organized in February, 2014. The paper has been published in IEEE Digital.

Team AcYut, comprising the following students, **Kaustubh Nawade** (2011B5A3610P), **Tarang Shah** (2011A8PS279P), **Akshay Morey** (2012B3A1605P), **Shreyas P. Dixit** (2012A8PS284P), **Anand Parwal** (2012A4PS223P), **Pranet Verma** (2012A3PS126P), **Pratyush Kar** (2013A7PS029P) and **V Aditya** (2013A7PS157P) gave demonstrations of AcYut-7, an indigenously developed autonomous humanoid robot at the BITSAA Global Meet at BITS Pilani, Hyderabad Campus conducted on 3 - 5 January, 2014. The team also gave demonstrations of their humanoid robot at Quark, the technical festival of BITS-Pilani, Goa Campus on 7 - 9 February, 2014.

→ Team AcYut during BITSAA Global Meet at BITS Pilani, Hyderabad Campus



Mr. Vishal Balasaheb Bhandare (2013H149255P) was among the top 8 finalists of the “Rural Crusaders Competition” conducted as part of “Amaethon-2014 – Food, Agribusiness and Rural Summit” organized by IIM Ahmedabad. His article “Future Market Scenario” was selected for the July 2014 issue of “CONQUEST” - the consulting Club of IIM Shillong.

→ Mr. Vishal Balasaheb Bhandare



Creative zone

Nirmaan Organisation

Nirmaan, a non-profit organization (Regd.No:1119/07), was started on 12 February, 2005 by a small group of four BITS Pilani students, with a passion to work for a better India and to fulfill their responsibility towards our less privileged brothers and sisters. After that day, there was no turning back and today Nirmaan stands strong with a workforce of 700+ volunteers in 6 chapters across 4 states of the country. At Nirmaan, people dream of an India where every citizen would enjoy equality, justice, liberty and fraternity.

→ Gyan Bodh Evening Tuitions



Nirmaan has become a nationwide movement to promote social innovation at the grassroots level, volunteerism, active citizenship and social leadership among the youth of the country. Broadly, Nirmaan works in the following sectors of development: education, employment, government interfacing, and community development.

→ Nirmaan Education Development Plans



Nirmaan's education initiatives provide tuitions to school kids, scholarships to meritorious students, career counselling to secondary school students and assistance to local government schools. They have an SHG named Unnati whose products are sold at fests organized at BITS Pilani and in the local market. Along with this, they have separate groups working for government interfacing and community development. Nirmaan's technical initiative, Parishodh works in collaboration with NSS, BITS Pilani to provide cutting-edge technical

solutions to problems faced at the grassroots level such as lighting, sanitation, drinking water etc.

Nirmaan also conducted a voter's registration camp from 26 - 28 January, 2014 wherein 300 students and 50 faculty members registered themselves as voters for the general elections. Sessions for generating awareness among women of the Baas community were conducted as part of their project, Participative Community Development. The sessions highlighted the role of women in the education of children and the teacher-community relationship. In Natbasthi, one of Nirmaan's wings, Shiksha Ki Ore, conducted an annual day for the kids who they teach at evening tuitions. These kids, who were once engaged as child labourers, are now successfully admitted to various private schools through the Right to Education act. Sunita, a beneficiary of Gyan Bodh, recently broke all barriers by securing admission in BITS Pilani. Gyan Bodh provides evening tuitions to students from classes 4 to 12 in Harinagar and Baas.

→ Classes in Harinagar and Bass



In APOGEE 2014, Nirmaan conducted two events: Dhiti and India Quiz. Dhiti, a kernel event organized in collaboration with NSS looked for technical solutions to real-life problem statements collected from different NGOs. India Quiz, one of the most popular events at APOGEE, was also a huge success. Dr. Anil Gupta, founder of the Honeybee Network, was a part of the judging panel of Dhiti, and also roused the enthusiasm of the youth present with a motivating speech on social entrepreneurship.

→ Farhan Akhtur at Nirmaan



With an aim of expanding its operations, Nirmaan has started a new chapter in the neighbouring college BKBIET. Currently, a team of 15 volunteers works on 3 projects providing evening tuitions and nourishment to children. Their expansion team is trying to take Nirmaan's values and work culture to new places in and around Pilani in an effort to increase volunteerism. After nine years of its formation, Nirmaan stands strong and proud as ever, taking giant leaps towards its goal of building a great country. Some last words that run through the vein of each Nirmaanite: "We have only one passion, the rise of a great nation."

APOGEE 2014

32nd edition of the Annual Technical Festival, APOGEE was held at BITS Pilani on 27 - 31 March, 2014. It started as an annual event in the year 1983, and is organized entirely by the students of BITS Pilani. While the events of APOGEE have evolved with the times, the enthusiasm and participation has been rising year after year.

→ APOGEE - 2014



This time, events included Design competitions, Paper presentations, Project presentations, Robot displays, Quizzes, Workshops on Telescope making, Cyber-forensics, Film making, Circuit design competitions, Aero-modelling, several Online Games and other Fun events. Photography and painting exhibitions were also organized.

→ APOGEE - 2014



APOGEE had a flying start with the inaugural ceremony held on 28th March in the presence of C. L. Dhamejani - Director, Vehicles Research and Development Establishment, Dr. Walter Lewin - Astrophysicist, MIT USA, and Prof. G Raghurama - Director, Pilani campus, along with faculty members, participants from 260 colleges and students of Pilani campus.

→ APOGEE - 2014



Highlights of this year's APOGEE include guest lectures under the program called, Think Again, in which the following distinguished speakers from different walks of life addressed the student populace : Dr Walter Lewin, Astrophysicist, MIT, USA; Dr Johanna Blakley, Norman Lear Centre, University of Southern California; Mr Mansoor Khan, Film Director and Author; Dr John Hoffman, Director of Photography, NASA; Dr Ryan Woodward, Animator, Storyboard Artist; Padmashri Dr Anil Gupta, Professor and Activist, IIM Ahmedabad.

→ APOGEE - 2014

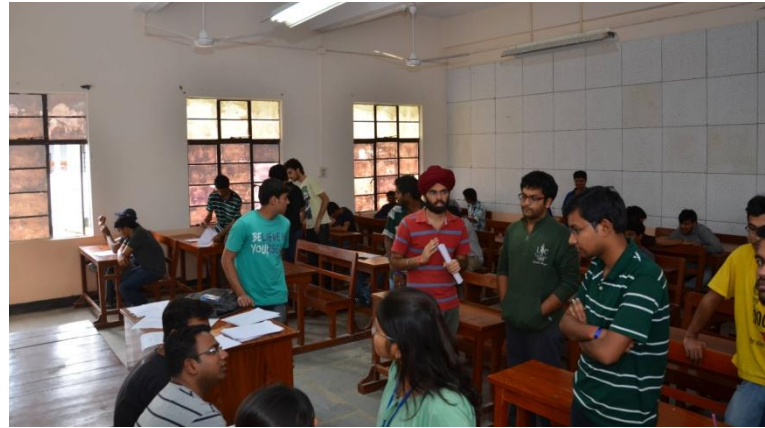


Another major event was Dhiti, organized by Nirmaan and the NSS Unit of BITS Pilani. It aimed to provide a platform for participants to invent technical solutions to the varied problems at the grassroots. There was a spectacular display of fireworks and a mesmerising laser show in the rotunda of the newly inaugurated Academic Building on the night of 29 March.

Speaking on the side-lines of the festival, Director of the Pilani campus, Prof. G. Raghurama said, "With excellent speakers, paper presentations, project demos, competitions and fun events, I am glad, our students have presented the APOGEE this year befitting the Golden Jubilee Celebrations of the university. I congratulate both the organizers and the participants from different colleges for showcasing their creativity, talents and innovation".

With over 650 outstation participants from 260 colleges across the country and another 2000 online participants, this year's APOGEE was one of the highest attended technical festivals in the country.

→ APOGEE - 2014



CHITARTH DAGAR MEMORIAL SCHOLARSHIPS

A rolling trophy to the Institute, one scholarship and trophy to best Gurukul participant, and another scholarship and trophy to best outgoing Mechanical Engineering student were presented in memory of Late Chitarth Dagar, III Year Mechanical Engineering Student, who passed away a few months ago. These were presented by parents of Late Chitarth Dagar, Smt. Sunita and R. C. Dagar and Chitarth's sister, Miss Yukhia Dagar on the occasion of the Farewell function for outgoing Mechanical Engineering students on Sunday, 20 April, 2014. While the rolling trophy to the Institute was received jointly by Vice Chancellor, Prof B N Jain and Director, Prof G Raghurama, the best Gurukul participant award comprising cash award of Rs 10,000 and the trophy went to Mr Prasanna Date. The Best Mechanical Engineering student award comprising cash award Rs 20000 and the trophy went to Mr Chandeesh Gujrala. Head of the Department of Mechanical Engineering, Prof K. S. Sangwan said that the best outgoing student was chosen on the basis of academic performance, leadership qualities and potential for social citizenship. In the beginning, the Gurukul team led by Prof Anil Roy presented a Ghazal program which was dedicated to Chitarth Dagar. It was followed by a short film on him made by the students of the department.

→ Best Mechanical Engineering student award



introducing new faculty

S. No.	Name	Designation	Discipline
1.	Dr. Pradyumn Chaturvedi	Assistant Professor	EEE
2.	Dr. (Mrs.) Anupam Yadav	Assistant Professor	HSS
3.	Mr. Giridhar M Kunkur	Librarian	Library Science
4.	Mr. Ishappa Bandi	Deputy Librarian	Library Science

editorial team



Editor: Dr. Gajendra Singh Chauhan

Member of Editorial Committee: Dr. (Mrs.) Anupam Yadav

Student Members: Sumi Jain and Rusheen Rathore



BITS Pilani
Pilani Campus

mediaspeak



Colleges Seek Help from e-Course Platform

BITS GET NEW ACADEMIC BLOCK

BITS Pilani has inaugurated a 1,60,000 sq.ft. academic block featuring classrooms, laboratories and faculty chambers in connection with its golden jubilee celebrations. Designed by noted architect Hafeez Contractor.

BITS PILANI OPENS CENTRE IN THE AREAS OF WATER, WASTE AND ENERGY MANAGEMENT

The Birla Institute of Technology and Science (BITS) Pilani has inaugurated a new research centre for Water, Waste and Energy Management. The centre will focus on research and development in these areas.



Scaling new heights

BIGGER THAN THE SUM OF BITS



Saretha Bharati inaugurates research centre at BITS-Pilani
The Birla Institute of Technology and Science (BITS) Pilani has inaugurated a new research centre for Water, Waste and Energy Management. The centre will focus on research and development in these areas.

Over 40 ITS-Pilani student with Google during the summer

Birla Institute of Technology and Science (BITS), Pilani announced that over 40 ITS Pilani students have been selected for the Google Summer of Code (GSoC) program.

4 Steps to the Cloud

India's educational awakening

In recent times a few leaders, notably the ex-President APJ Abdul Kalam have laid stress on improving quality of education and across the country, emphasized the point that higher education is the key to India's growth. The major concern is to improve the quality of education and across the country, emphasized the point that higher education is the key to India's growth.

Robotics - Opportunities, Challenges and the Future in India

Robotics is a rapidly growing field in India. It offers numerous opportunities for students and researchers. However, there are also challenges, such as the need for more infrastructure and skilled workforce.

युवा करें उद्यमों की स्थापना



युवाओं को उद्यमों की स्थापना करने के लिए प्रोत्साहित किया जा रहा है। सरकार और निजी क्षेत्र दोनों ही इस दिशा में प्रयास कर रहे हैं।

TOP 75 COLLEGES ENGINEERING (Pvt.)

Rank	College Name	Composite Score
1	Birla Institute of Technology & Science (BITS)	545
2	Birla Institute of Technology (BIT)	492
3	Indian Institute of Technology (IIT)	485
4	Anna University	478

BITS STUDENTS WIN GOOGLE PRIZE

40 BITS Pilani students have won the Google Summer of Code (GSoC) prize. They have developed various open-source projects for Google.

Get coded this summer at Google

Join the Google Summer of Code (GSoC) program. It's a great opportunity for students to gain coding experience and contribute to open-source projects.

FOR A HIGH SCORE

Students should focus on their preparation for the upcoming exams. Consistent practice and understanding the concepts are key to achieving high scores.

Students should also focus on their overall health and well-being. A balanced diet and regular exercise can help improve their performance.



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